Building a GIS for Interpreting History
Using SILAS.ST, the Spatially Interactive Literature Analysis System Study Tool

The SILAS Study Tool (SILAS.ST) was created for Professor Lillian Larsen in the Religious Studies Department at the University of Redlands, in Redlands, CA. Professor Larsen wants her students to read historical texts with a critical eye, focusing on how geography influences texts and understanding the nature of historical geographical sources. SILAS.ST gives students the ability to overlay and juxtapose information from a variety of sources.

The goal of SILAS.ST was to tailor a GIS for historical research and have it be accessible to undergraduate students. With this project we addressed several challenges: out-of-box ArcGIS software is not ideally suited for exploratory or educational use because of its learning curve, and GIS is not ideally suited for historical research because of the nature of historic sources. To account for the fragmented and ambiguous nature of historical sources, SILAS.ST has been fitted with its own metadata standard for the purpose of students documenting historical geographic information. From skill and knowledge of the cartographer, to the processing of the data to be GIS "ready", this metadata structure attempts to thoroughly document the contextual and technical aspects of the data, helping students evaluate the sources of information judiciously and with a critical eye.

This customized metadata will help students understand the historical relevance and uncertainty inherent in the maps they create and the map layers they encounter when studying historical topics, such as the compiled map below. The metadata is intended to be filled out over a period of time, and to be revisited often by students. Additional customization of the ArcMap user interface will aid in introducing digital mapping technologies to humanities students, using custom toolbars shown below.

Example Data Sources for Historical Research
Student made Google Map
"Areas of Jewish settlement following the Diaspora, circa 100 CE" produced by a student using Google’s My Map and three historical regional sources.

Scanned Atlas Page
"Areas of Jewish settlement in the Roman Empire, circa 100 CE" scanned from Michael Grant’s Ancient History Atlas.

David Rumsey Map Collection
"Map of the Roman Empire at the peak of its greatest extent about the year 117 AD" downloaded from the David Rumsey Map Collection, an online database of 20,000 images.

+ ESRI Data & Maps

Custom GIS Metadata for Students Documenting Historical Map Sources
Questions that will prompt students to evaluate and document a variety of map and information sources:

Quick Facts
What is important to know about this map source? Is it applicable to the time period and geographical extent you are studying? Is there enough detail?

Origin & Authority
What is the origin of this map? Who currently has authority over this map or information?

Relevance & Purpose
What is the purpose of this map? Is the information relevant to your study?

Accuracy & Reliability
How was the map created? How did the cartographer decide what to include and where to place it? How were the GIS data created?

Notes
Any additional notes? Are there any recommended resources that would be useful in evaluating this map information?

Sources Compiled into ArcMap 9.3
Through documentation and research, students will learn how to approach a map that is compiled from a variety of historical and modern day sources within GIS using SILAS.ST.

As students work through the custom metadata forms, they can begin to answer these questions:
Does the map describe conditions during a particular time period?
Are there political, ideological, cultural, religious or personal biases represented in the map?
How accurate is this map?

Custom Toolbars for Humanities Students
Explore Data: Pan, Identify, Find, Transparency, Add Layers
Hand Draw: Draw Lines & Polygons & Points, Add Text, Save
Map Information: Access the Custom SILAS.ST Metadata and Stylesheet
Create Atlas: Add Title, Scale Bar, Pictures, Print Preview

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